

Service Manual

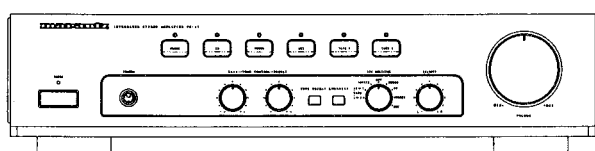
74PM47/01B/02B/05B

74PM57/01B/02B/05B

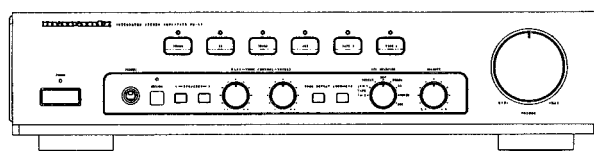
Integrated Stereo Amplifier



MARA-00662



PM-47



PM-57

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Please use this service manual with referring to the user guide (D.F.U) without fail.

marantz®

model PM-47/PM-57

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, **MARANTZ** company has created the ultimate in stereo sound. Only original **MARANTZ** parts can insure that your **MARANTZ** product will continue to perform to the specifications for which it is famous.

Parts for your **MARANTZ** equipment are generally available to our National Marantz Subsidiary or Agent.

ORDERING PARTS:

Parts can be ordered either by mail or by Fax.. In both cases, the correct part number has to be specified.

The following information must be supplied to eliminate delays in processing your order:

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature: any order form or Fax. must be signed, otherwise such part order will be considered as null and void.

USA

MARANTZ AMERICA, INC.
440 MEDINAH ROAD
ROSELLE, ILLINOIS 60172-2330
USA
PHONE : 708-307-3100
FAX : 708-307-2687

CANADA

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FAX : 708-820-8103

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TC ELECTRONICS CANADA LTD
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PHONE : 514-457-4044
FAX : 514-457-5524

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MARANTZ EUROPE B.V.
P.O.BOX 80002
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PHONE : +31-40-2732241
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HONG-KONG

FORWARD INTERNATIONAL CORP. LTD.
15 TH FLOOR, REGENT CENTRE,
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FAX : +852 521-7835

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746-750 WANGBURAPA BANGKOK
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6 TH FL NO. 148 SUNG KIANG RORD,
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日本マランツ株式会社

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営業本部 〒150 東京都渋谷区恵比寿南1丁目11番9号

SHOCK, FIRE HAZARD SERVICE TEST:

CAUTION: After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before it is return to the user/customer.

Ref. UL Standard NO.1492.

In case of difficulties, do not hesitate to contact the Technical
Department at above mentioned address.

1. TECHNICAL SPECIFICATIONS

	PM-47	PM-57
Power output		
RMS 8 Ohms/4 Ohms (20 Hz - 20 kHz).....	40 / 60 W	50 / 70 W
DIN 8 Ohms 14 Ohms.....	45 / 65 W	55 / 75 W
IHF dynamic power		
8 Ohms I 4 Ohms.....	70 / 90 W	80 / 110 W
THD at 8 Ohms RMS rated output.....	0.008%	0.008%
Intermodulation distortion	0.008%	0.008%
Dam ping factor	60	60
Magnetic cartridge input		
Input sensitivity impedance.....	2.5 mV / 47 k ohms	2.5 mV / 47 k ohms
Accuracy of frequency response to RIAA	0.5 dB	0.5 dB
Signal to noise ratio	86 dB	86 dB
Tuner / CD / Aux / Tape inputs		
Input sensitivity impedance.....	150 mV / 20 k ohms	150 mV / 20 k ohms
Signal to noise ratio	96 dB	96 dB
Frequency response (-1 dB).....	10 - 50 kHz	10 - 50 kHz
Tone characteristic (100 Hz and 10 kHz).....	± 6 dB	± 6 dB
Channel separation.....	80 dB	80 dB
General		
Power Requirements		
/ 01 version (4 voltages).....	110/120/220/240 V AC, 50/60 Hz	110/120/220/240 V AC, 50/60 Hz
/ 02 / 05 version.....	230 V AC, 50 Hz	230 V AC, 50 Hz
Dimensions		
Panel Width.....	439 mm	439 mm
Panel Height.....	103 mm	103 mm
Depth.....	340 mm	340 mm
Weight		
Unit alone	5.4 kg	5.4 kg

Specifications subject to change without prior notice.

2. ADJUSTMENT

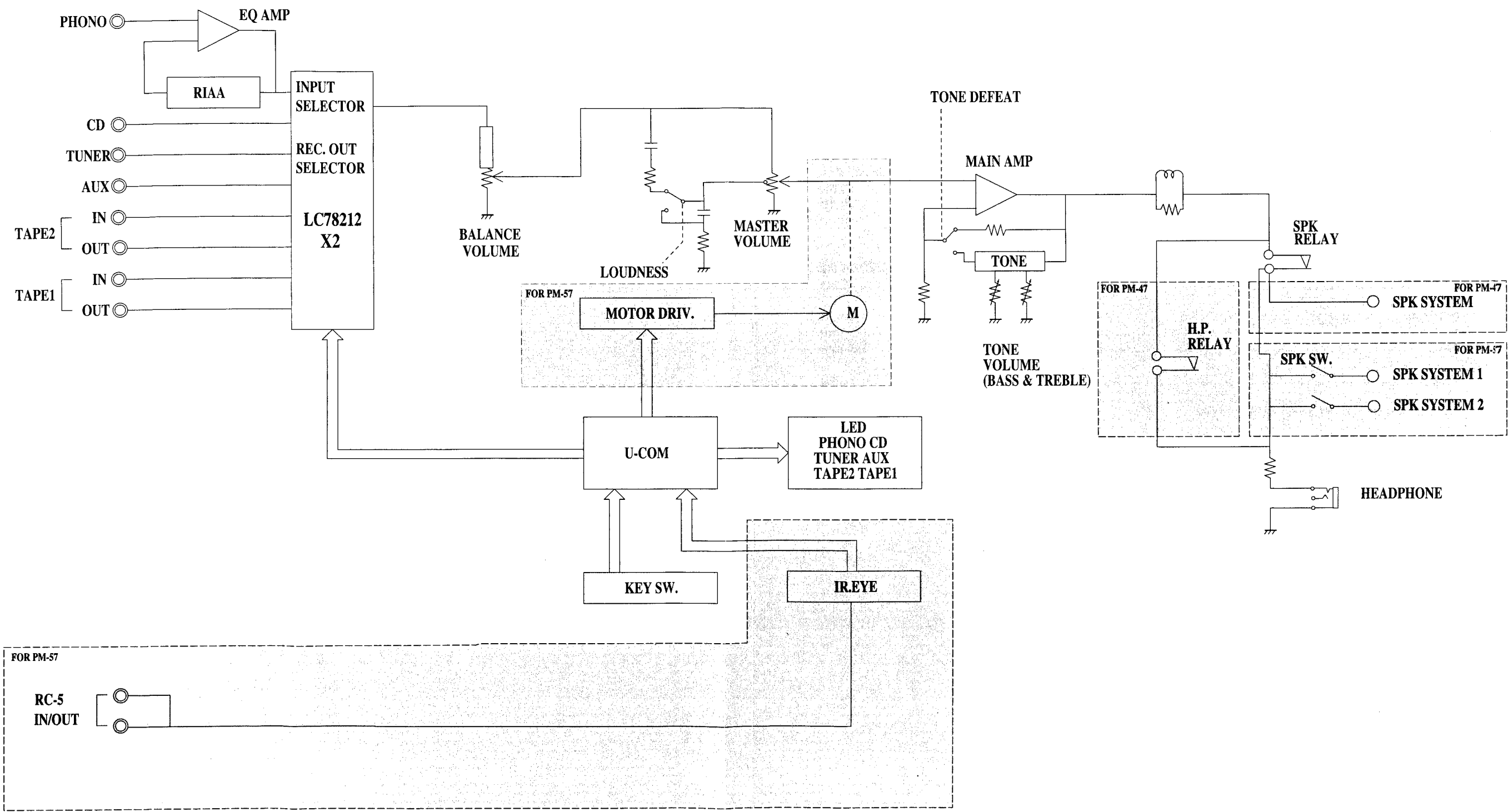
IDLING CURRENT ADJUSTMENT

Setting: Mid-position for Tone (Bass & Treble) and Balance
Minimum position for Volume
OFF position for Loudness & Tone defeat

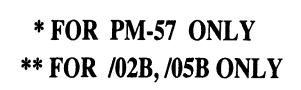
Adjust	Measured across	Voltmeter reading *
3295	3309	14mv
3296	3310	14mv

*Adjustment should be done after switch on the set for 5 minutes.

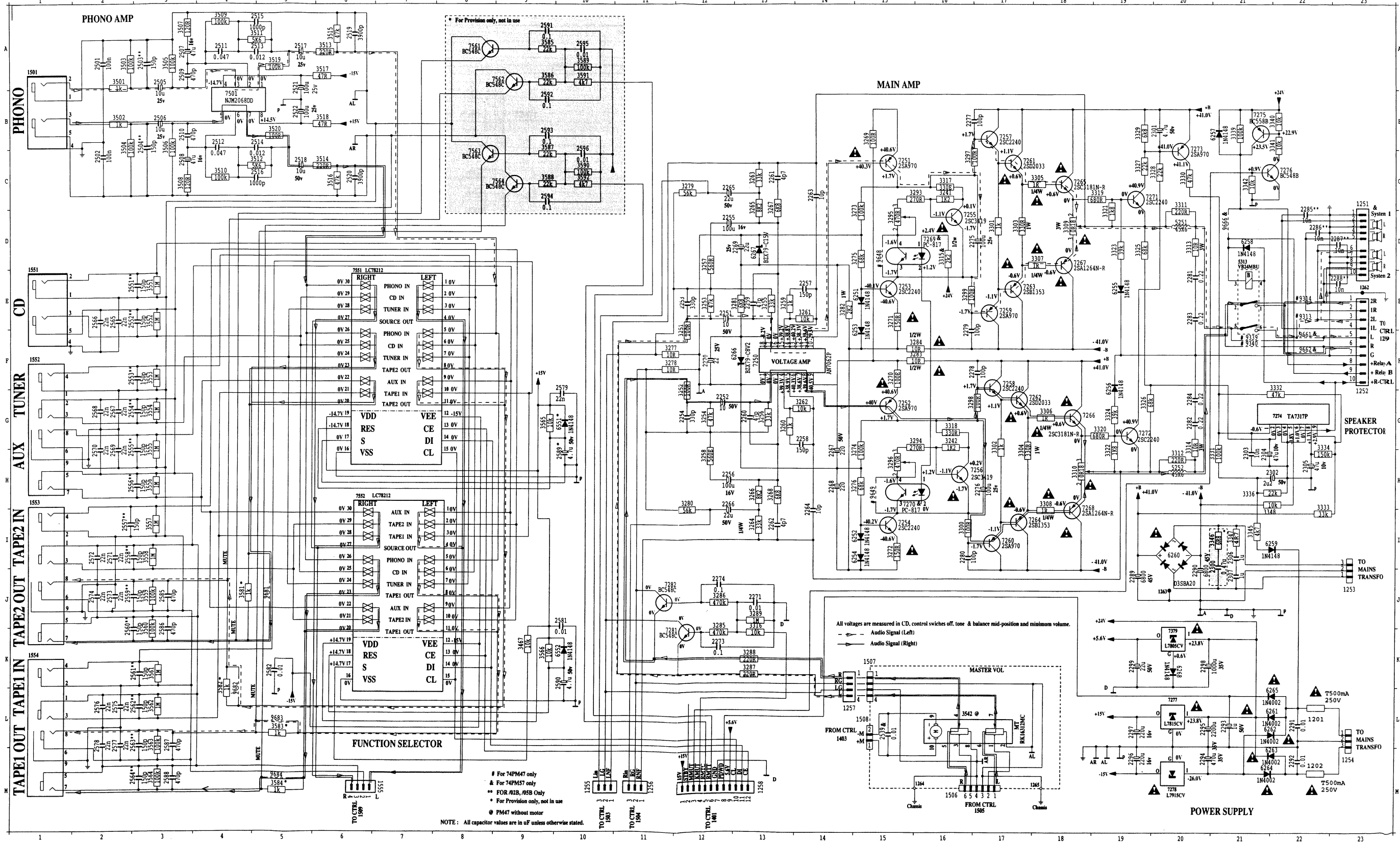
PM-47/57 BLOCK DIAGRAM



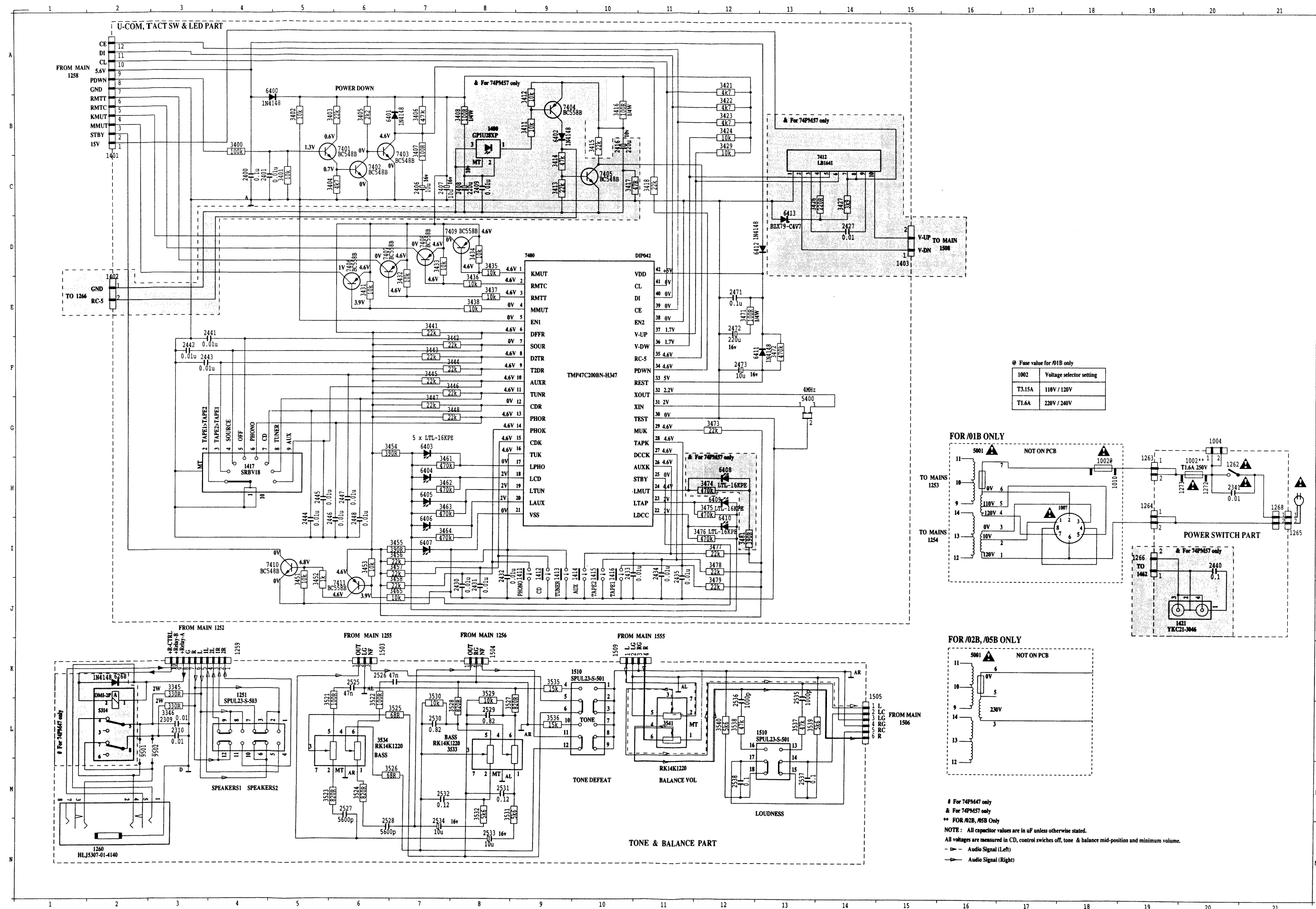
PM-47/57 WIRING DIAGRAM

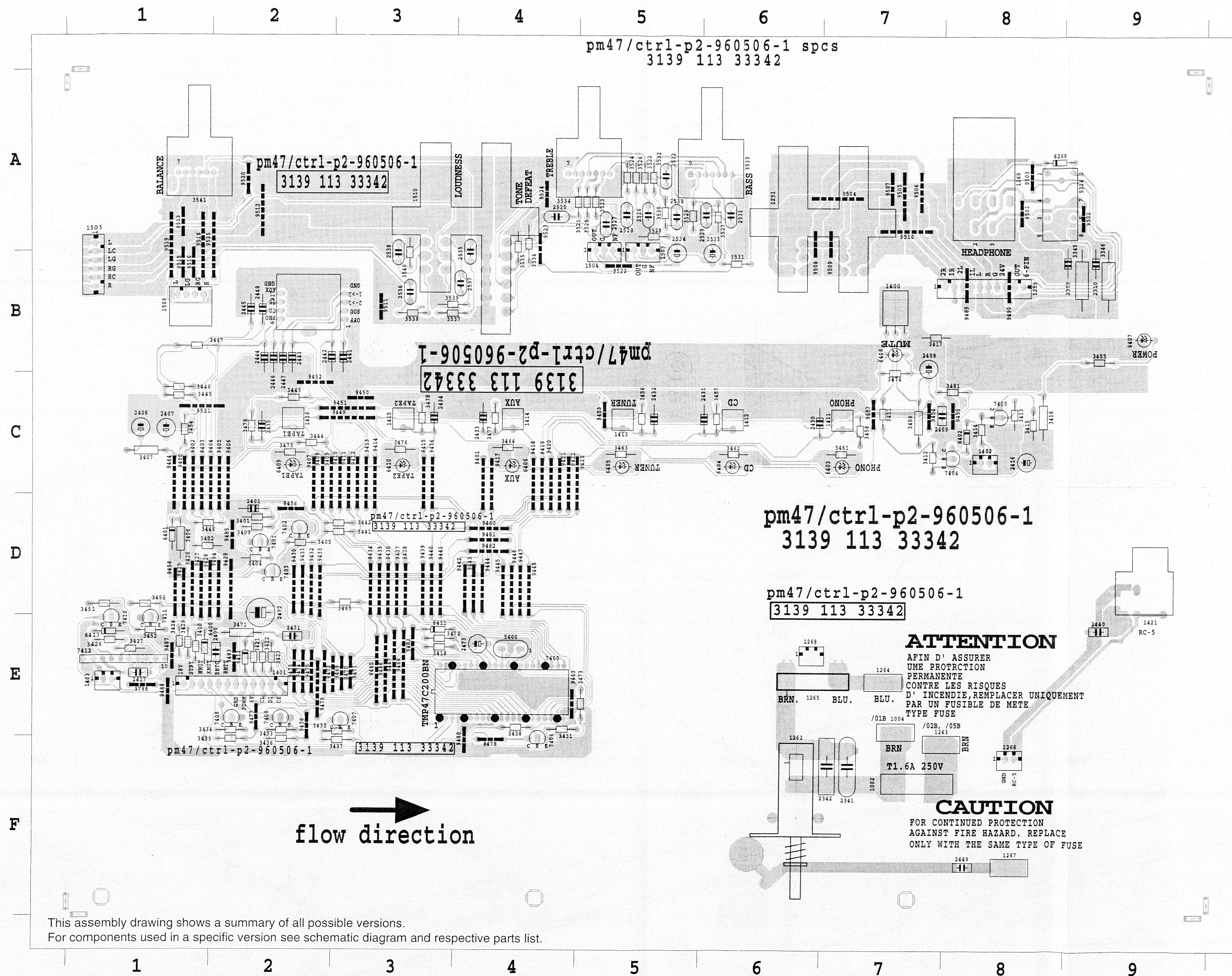


1251	G23	1501	A	1	2254	G12	2266	H14	2278	F16	2289	B1	2300	T20	2504	B	2515	A	2533	F	2564	H	2575	L	2588	H10	3252	G12	3263	C13	3274	H12	3285	J12	3299	B16	3310	H18	3321	D19	3332	F22	3346	I21	3508	C	3519	A	3559	J	3584	M	5313	D21	6261	L22	7251	C15	7262	G17	7271	C20	7552	H	9661	F22
1252	A	1502	A	1	2255	G12	2267	H14	2279	F16	2290	B1	2301	T21	2505	B	2516	A	2534	F	2565	H	2576	L	2589	H11	3253	G12	3264	C13	3275	H12	3286	J12	3299	B16	3311	H18	3322	D19	3333	F22	3347	I21	3509	C	3520	A	3560	J	3585	M	5314	D21	6262	L22	7252	C15	7263	G17	7272	C20	7553	H	9662	F22
1253	M13	1503	M	1	2256	G12	2268	H14	2280	F16	2291	B1	2302	T21	2506	B	2517	A	2535	F	2566	H	2577	L	2590	H11	3254	G12	3265	C13	3276	H12	3287	J12	3299	B16	3312	H18	3323	D19	3334	F22	3348	I21	3510	C	3561	J	3586	M	5315	D21	6263	L22	7253	C15	7264	G17	7273	C20	7554	H	9663	F22		
1254	M13	1504	M	1	2257	G14	2269	H14	2281	F16	2292	B1	2303	T21	2507	B	2518	A	2536	F	2567	H	2578	L	2591	H11	3255	G12	3266	C13	3277	H12	3288	J12	3299	B16	3313	H18	3324	D19	3335	F22	3349	I21	3511	C	3562	J	3587	M	5316	D21	6264	L22	7254	C15	7265	G17	7274	C20	7555	H	9664	F22		
1255	M13	1505	M	1	2258	G14	2270	F12	2282	F12	2293	B1	2304	T21	2508	B	2519	A	2537	F	2568	H	2579	L	2592	H11	3256	G12	3267	C13	3278	H12	3289	J12	3299	B16	3314	H18	3325	D19	3336	F22	3350	I21	3512	C	3563	J	3588	M	5317	D21	6265	L22	7255	C15	7266	G17	7275	C20	7556	H	9665	F22		
1256	M14	1506	M	1	2259	G14	2271	F12	2283	F12	2294	B1	2305	T21	2509	B	2520	A	2538	F	2569	H	2580	L	2593	H11	3257	G12	3268	C13	3279	H12	3290	J12	3299	B16	3315	H18	3326	D19	3337	F22	3351	I21	3513	C	3564	J	3589	M	5318	D21	6266	L22	7256	C15	7267	G17	7276	C20	7557	H	9666	F22		
1257	M14	1507	M	1	2260	G14	2272	F12	2284	F12	2295	B1	2306	T21	2510	B	2521	A	2539	F	2570	H	2581	L	2594	H11	3258	G12	3269	C13	3280	H12	3291	J12	3299	B16	3316	H18	3327	D19	3338	F22	3352	I21	3514	C	3565	J	3590	M	5319	D21	6267	L22	7257	C15	7268	G17	7277	C20	7558	H	9667	F22		
1258	M14	1508	M	1	2261	G14	2273	F12	2285	F12	2296	B1	2307	T21	2511	B	2522	A	2540	F	2571	H	2582	L	2595	H11	3259	G12	3270	C13	3281	H12	3292	J12	3299	B16	3317	H18	3328	D19	3339	F22	3353	I21	3515	C	3566	J	3591	M	5320	D21	6268	L22	7258	C15	7269	G17	7278	C20	7559	H	9668	F22		
1259	M14	1509	M	1																																																														



CONTROL BOARD



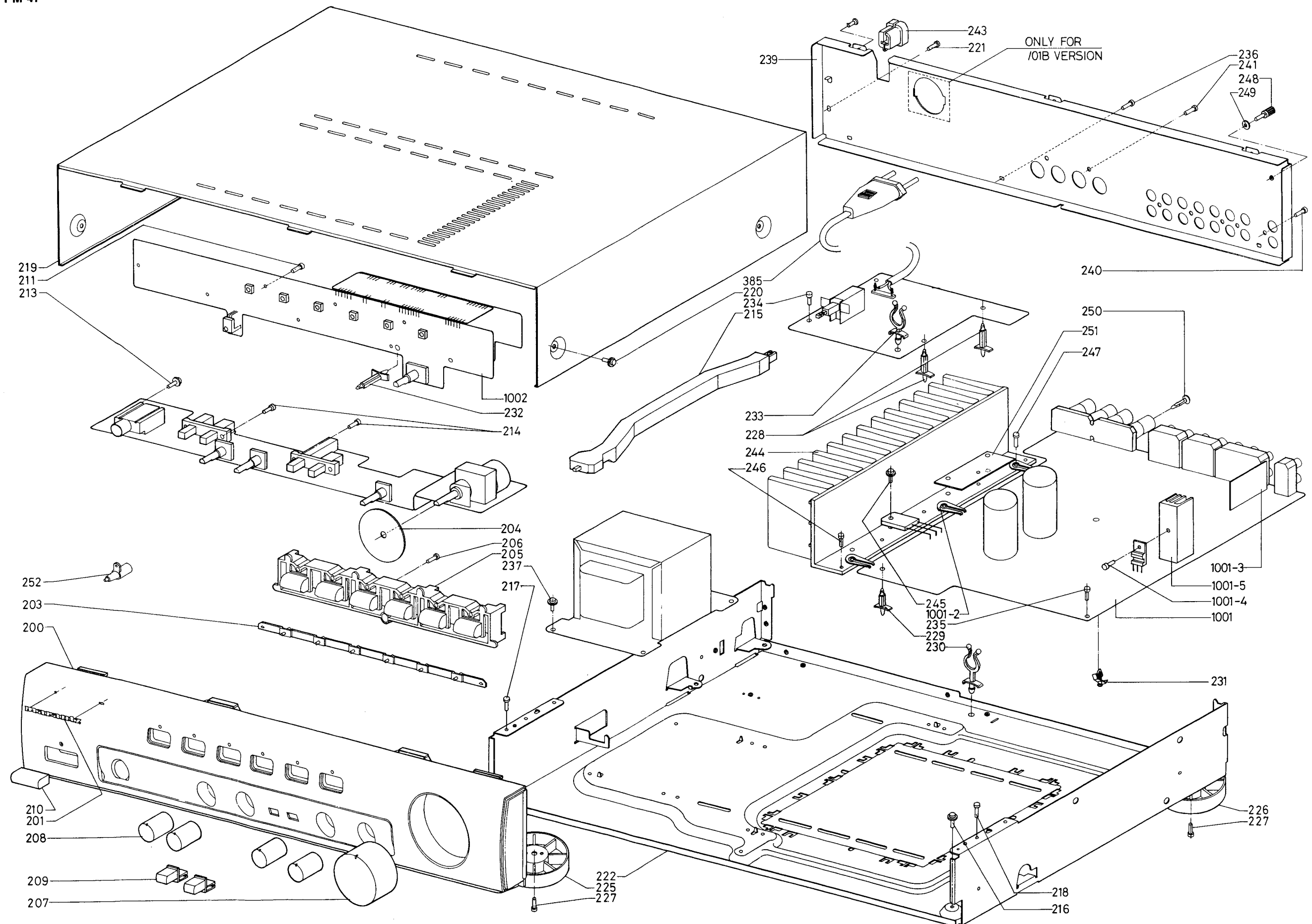


This assembly drawing shows a summary of all possible versions.
For components used in a specific version see schematic diagram and respective parts list.

1002 F 7	3423 B 2	9400 C 1	9510 A 7
1004 E 7	3424 E 1	9401 C 4	9511 B 3
1251 B 6	3426 E 1	9402 C 1	9512 A 2
1259 B 8	3427 E 1	9403 C 1	9513 A 1
1260 A 8	3429 E 1	9404 C 1	9515 B 1
1262 F 6	3431 E 4	9405 C 2	9516 B 1
1263 F 7	3432 E 3	9406 C 2	9518 A 1
1264 E 7	3433 E 2	9407 C 2	9519 A 1
1265 E 6	3434 E 2	9408 C 2	9520 A 2
1266 F 8	3435 F 2	9409 C 2	9521 C 1
1267 F 8	3436 F 2	9410 C 3	9522 B 5
1268 E 6	3437 F 3	9411 C 3	9523 A 4
1400 B 7	3438 E 4	9412 C 3	9524 A 4
1401 E 2	3441 D 3	9413 C 3	9525 A 2
1402 C 8	3442 D 3	9414 C 3	9527 C 7
1403 E 1	3443 C 2	9415 C 3	9788 B 1
1411 C 7	3444 C 2	9416 C 3	
1412 C 6	3445 C 1	9417 C 4	
1413 C 5	3446 C 1	9418 C 4	
1414 C 4	3447 B 1	9419 C 4	
1415 C 3	3448 D 1	9420 C 4	
1416 C 2	3451 D 1	9421 C 4	
1417 B 2	3452 E 1	9422 C 4	
1421 D 9	3453 D 1	9423 C 4	
1503 A 5	3454 C 1	9425 D 1	
1504 A 5	3455 B 9	9426 D 1	
1505 B 1	3456 C 5	9427 D 1	
1509 B 1	3457 C 6	9428 D 1	
1510 B 4	3458 C 7	9429 D 2	
2309 B 9	3461 C 7	9430 D 2	
2310 B 9	3462 C 6	9431 D 2	
2341 F 7	3463 C 5	9432 D 2	
2342 F 7	3464 C 4	9433 D 2	
2400 E 2	3465 D 3	9434 D 3	
2401 D 2	3471 E 2	9435 D 3	
2406 C 1	3472 E 3	9436 D 3	
2407 C 1	3473 E 5	9437 D 3	
2408 B 7	3474 B 7	9438 D 3	
2409 C 7	3475 C 2	9439 D 3	
2416 C 8	3476 C 3	9440 D 3	
2427 E 1	3477 C 4	9441 D 3	
2430 C 6	3478 C 3	9442 D 4	
2431 C 6	3479 C 2	9443 D 4	
2432 C 5	3481 C 8	9444 D 4	
2433 C 4	3521 A 4	9445 D 4	
2434 C 3	3522 A 5	9446 D 4	
2435 C 2	3523 A 5	9447 D 4	
2440 E 9	3524 A 5	9448 D 4	
2441 B 3	3525 A 5	9449 C 3	
2442 B 2	3526 A 5	9450 C 3	
2443 B 2	3527 A 6	9451 C 3	
2444 B 2	3528 A 5	9452 C 2	
2445 B 2	3529 A 5	9453 C 5	
2446 B 2	3530 A 5	9454 C 7	
2447 B 2	3531 B 6	9455 C 8	
2448 B 2	3532 A 5	9456 D 2	
2449 F 8	3533 A 6	9458 D 1	
2471 E 2	3534 A 5	9460 D 4	
2472 D 2	3535 A 4	9461 D 4	
2473 E 4	3536 A 4	9462 D 4	
2525 A 4	3537 B 3	9463 E 4	
2526 A 5	3538 B 3	9464 C 1	
2527 A 5	3539 B 3	9465 E 3	
2528 A 5	3540 B 3	9466 E 3	
2529 A 6	3541 A 1	9467 E 3	
2530 A 5	3514 A 8	9468 E 3	
2531 A 6	5400 E 4	9469 E 2	
2532 A 5	6268 A 8	9470 E 3	
2533 B 6	6400 E 1	9471 E 3	
2534 B 5	6401 D 1	9472 E 2	
2535 B 4	6402 C 8	9473 E 2	
2536 B 3	6403 C 7	9474 E 2	
2537 B 4	6404 C 6	9475 E 2	
2538 B 3	6405 C 5	9476 E 2	
3345 B 9	6406 C 4	9477 E 2	
3346 B 9	6407 B 9	9478 E 4	
3400 E 1	6408 B 7	9479 E 2	
3401 D 2	6409 C 2	9480 E 4	
3402 D 1	6410 C 3	9482 E 3	
3403 D 2	6411 E 3	9483 E 2	
3404 D 2	6412 E 2	9484 D 2	
3405 D 2	6413 E 1	9485 D 2	
3406 D 1	7400 E 4	9487 E 1	
3407 C 1	7401 D 2	9488 E 1	
3408 C 7	7402 D 2	9489 E 8	
3411 C 7	7403 D 2	9490 E 8	
3412 C 7	7404 C 8	9491 A 8	
3413 C 8	7405 C 8	9492 A 9	
3414 C 8	7406 F 4	9493 A 8	
3415 C 8	7407 E 3	9494 A 7	
3416 C 8	7408 E 2	9495 A 7	
3417 B 7	7409 E 2	9496 A 7	
3418 E 3	7410 E 1	9497 A 7	
3421 E 2	7411 E 1	9498 A 6	
3422 E 2	7412 E 1	9499 A 7	

6. EXPLODED VIEW AND PARTS LIST

For PM-47



PARTS LIST FOR PM-47

(VERS. :VERSION, U:U.S.A., F:JAPAN, K:FAR EAST, **:EUROPE)

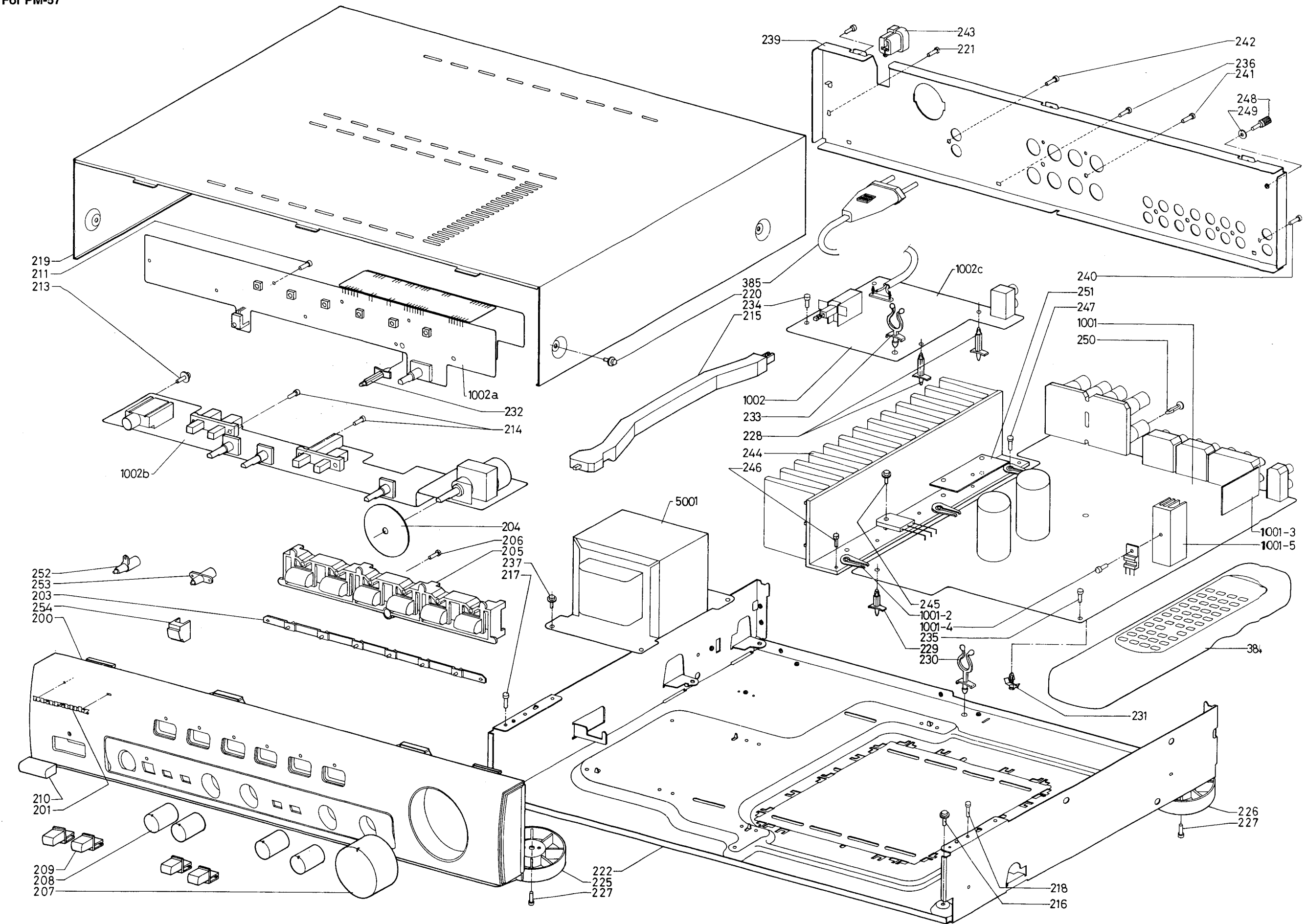
POS. NO	VERS. COLOR	PART NO. (FOR EUROPE)	DESCRIPTION	PART NO. (USA/JPN)
200		4822 459 04198	FRONT CABINET	QP45904198
201		4822 454 12948	MARANTZ BADGE	QP45412948
203		4822 466 11148	LIGHT GUIDE LED	QP46611148
205		4822 410 10558	BUTTON - SET FUNCTION	QP41010558
207		4822 410 10559	VOLUME KNOB	QP41010559
208		4822 410 10561	KNOB	QP41010561
209		4822 410 10562	BUTTON PUSH/PUSH	QP41010562
210		4822 462 72053	POWER BUTTON	QP46272053
225		4822 462 42129	LEG - GOLD	QP46242129
226		4822 462 42131	LEG - GOLD	QP46242131
▲ 243		4822 532 60948	BUSH	QP53260948
248		4822 502 13921	SCREW - PHONO GND	QP50213921
252		4822 466 11149	LIGHT GUIDE POWER	QP46611149
385	01B/02B	4822 321 10781	MAINS CORD	QP32110781
▲ 385	05B	4822 321 10941	MAIN CORD UK	QP32110941
387		4822 736 14443	INSTRUCTION FOR USE	QP73614443
▲ 391	01B	4822 263 21092	ADAPTOR PLUG 6A 250V	QP26321092
▲ 392	01B	4822 070 33152	FUSE T3.15A IEC 250V	QP07033152
▲ 1007	01B	4822 273 10317	VOLTAGE SELECTOR	QP27310317
▲ 1010	01B	4822 256 30233	FUSE HOLDER	QP25630233
2449	02B/05B	4822 122 33307	10nF 5% 50V	QP12233307
▲ 5001	01B	4822 146 10506	MAINS TRANSFORMER OVS	QP14610506
▲ 5001	02B/05B	4822 146 10517	MAINS TRANSFORMER IEC	QP14610517

PARTS LIST FOR PM-57

(VERS.:VERSION, U:U.S.A., F:JAPAN, K:FAR EAST, **:EUROPE)

POS. NO	VERS. COLOR	PART NO. (FOR EUROPE)	DESCRIPTION	PART NO. (USA/JPN)
200		4822 459 04212	FRONT CABINET	QP45904212
201		4822 454 12948	MARANTZ BADGE	QP45412948
203		4822 466 11148	LIGHT GUIDE LED	QP46611148
205		4822 410 10558	BUTTON - SET FUNCTION	QP41010558
207		4822 410 10559	VOLUME KNOB	QP41010559
208		4822 410 10561	KNOB	QP41010561
209		4822 410 10562	BUTTON PUSH/PUSH	QP41010562
210		4822 462 72053	POWER BUTTON	QP46272053
225		4822 462 42129	LEG GOLD	QP46242129
226		4822 462 42131	LEG GOLD	QP46242131
▲ 243		4822 532 60948	BUSH	QP53260948
248		4822 502 13921	SCREW PHONO GND	QP50213921
252		4822 466 11149	LIGHT GUIDE POWER	QP46611149
253		4822 466 11158	LIGHT GUIDE MUTE	QP46611158
254		4822 381 11749	WINDOW REMOTE CONTRO	QP38111749
384		4822 219 10067	REMOTE CONTROL RC040	QP21910067
385	01B/02B	4822 321 10781	MAINS CORD	QP32110781
▲ 385	05B	4822 321 10941	MAINS CORD UK	QP32110941
387		4822 736 14443	INSTRUCTION FOR USE	QP73614443
▲ 391	01B	4822 263 21092	ADAPTOR PLUG 6A 250V	QP26321092
▲ 392	01B	4822 070 33152	FUSE T3.15A IEC 250V	QP07033152
▲ 1007	01B	4822 273 10317	VOLTAGE SELECTOR	QP27310317
▲ 1010	01B	4822 256 30233	FUSE HOLDER	QP25630233
2449	02B/05B	4822 122 33307	10nF 5% 50V	QP12233307
▲ 5001	01B	4822 146 10521	MAINS TRANSFORMER OV	QP14610521
▲ 5001	02B/05B	4822 146 10518	MAINS TRANSFORMER IEC	QP14610518

For PM-57



7. ELECTRICAL PARTS LIST

(VERS.:VERSION, U:U.S.A., F:JAPAN, K:FAR EAST, **:EUROPE)

POS. NO	VERS. COLOR	PART NO. (FOR EUROPE)	DESCRIPTION	PART NO. (USA/JPN)	POS. NO	VERS. COLOR	PART NO. (FOR EUROPE)	DESCRIPTION	PART NO. (USA/JPN)
▲ 1201 ▲ 1202 1251 1251 1501	PM47 PM57	MAIN BOARD MISCELLANEOUS			2302		4822 124 41576	2.2μF 20% 50V	QP12441576
		4822 071 55001	FUSE T500mA 250V	QP07155001	2303		4822 124 80141	10nF 10% 50V	QP12480141
		4822 071 55001	FUSE T500mA 250V	QP07155001	2304		4822 124 80196	47μF 20% 50V	QP12480196
		4822 265 10649	LOUDSPEAKER SOCKET	QP26510649	2305		4822 124 80196	47μF 20% 50V	QP12480196
		4822 265 10655	LOUDSPEAKER SOCKET 8P	QP26510655	2306		4822 121 51319	1μF 10% 63V	QP12151319
1552 1553 1554		4822 265 10654	CINCH SOCKET - PHONO	QP26510654	2307		4822 121 51319	1μF 10% 63V	QP12151319
		4822 267 20453	CINCH SOCKET - CD/TUNER/AUX	QP26720453	2501		5322 121 42386	100nF 5% 63V	QQ12142386
		4822 267 31452	CINCH SOCKET - TAPE 2	QP26731452	2502		5322 121 42386	100nF 5% 63V	QQ12142386
		4822 267 31452	CINCH SOCKET - TAPE 1	QP26731452	2503	/02B/05B	4822 126 13985	150pF 5% 50V	QP12613985
					2504	/02B/05B	4822 126 13985	150pF 5% 50V	QP12613985
5251 5252 5313		4822 157 70599	IND. FIXED BEAD	QP15770599	2505		4822 124 11781	S10μF 25V 20%	QP12411781
		4822 157 70599	IND. FIXED BEAD	QP15770599	2506		4822 124 11781	S10μF 25V 20%	QP12411781
		4822 280 80764	RELAY 2P 24V 5A	QP28080764	2507		4822 124 80196	47μF20% 50V	QP12480196
					2508		4822 124 80196	47μF20% 50V	QP12480196
					2509		4822 126 10781	470pF 50V	QP12610781
2251 2252 2253 2254 2255		CAPACITORS			2510		4822 126 10781	470pF 50V	QP12610781
		4822 124 11777	S10μF 25V 20%	QP12411777	▲ 2511		4822 126 12785	47nF Y5VTUB 50V	QP12612785
		4822 124 11777	S10μF 25V 20%	QP12411777	▲ 2512		4822 126 12785	47nF Y5VTUB 50V	QP12612785
		4822 126 10779	330pF 50V	QP12610779	2513		4822 121 41935	12nF 5% 250V	QP12141935
		4822 126 10779	330pF 50V	QP12610779	2514		4822 121 41935	12nF 5% 250V	QP12141935
2256 2257 2258 2259 2260		4822 124 11761	100μF 20% 50V	QP12411761	2515		4822 121 51299	1nF 10% 50V	QP12151299
		4822 126 13985	150pF 5% 50V	QP12613985	2516		4822 121 51299	1nF 10% 50V	QP12151299
		4822 126 13985	150pF 5% 50V	QP12613985	2517		4822 124 11781	S10μF 25V 20%	QP12411781
		4822 122 31072	47pF 2% 100V	QP12231072	2518		4822 124 11781	S10μF 25V 20%	QP12411781
		4822 122 31072	47pF 2% 100V	QP12231072	2519		4822 126 13151	3.9nF 10% Y5R 16V	QP12613151
2261 2262 2263 2264 2265		4822 122 10465	4.7pF 10% 50V	QP12210465	2520		4822 126 13151	3.9nF 10% Y5R 16V	QP12613151
		4822 122 10465	4.7pF 10% 50V	QP12210465	2521		4822 124 80293	100μF20% 25V	QP12480293
		4822 122 33847	10pF 5%NPO 50V	QP12233847	2522		4822 124 80293	100μF20% 25V	QP12480293
		4822 122 33847	10pF 5%NPO 50V	QP12233847	▲ 2539	PM57	4822 121 51387	10nF 20% 16V	QP12151387
		4822 124 41596	22μF20% 50V	QP12441596	2541	/02B/05B	4822 122 33849	150pF 10%Y5P 50V	QP12233849
2266 2267 2268 2269 2270		4822 124 41596	22μF20% 50V	QP12441596	2542		4822 122 33849	150pF 10%Y5P 50V	QP12233849
		5322 124 22094	220μF20% 50V	QQ12422094	2543				
		5322 124 22094	220μF20% 50V	QQ12422094	▲ 2565		4822 126 12147	22nF10% Y5R 25V	QP12612147
		4822 124 11778	S22μF 25V 20%	QP12411778	2568				
		4822 124 11778	S22μF 25V 20%	QP12411778	▲ 2579		4822 124 80141	10nF10% 50V	QP12480141
2271 2273 2274 2275 2276		5322 121 42386	100nF 5% 63V	QQ12142386	2581		4822 121 51387	10nF20% 16V	QP12151387
		5322 121 42386	100nF 5% 63V	QQ12142386	▲ 2582				
		5322 121 42386	100nF 5% 63V	QQ12142386	2585		4822 122 33519	470pF10% 50V	QP12233519
		4822 124 80293	100μF 20% 25V	QP12480293	2588				
		4822 124 80293	100μF 20% 25V	QP12480293	▲ 2590		4822 124 40246	4.7μF20% 63V	QP12440246
2277 2280 2281 2284		4822 126 10777	100pF 50V	QP12610777	3241		RESISTORS		
					3242		4822 116 52207	1K2 5% 0.5W	QP11652207
		4822 121 42408	220nF 5% 63V	QP12142408	3251		4822 116 52207	1K2 5% 0.5W	QP11652207
					3252		4822 116 52175	100E 5% 0.5W	QP11652175
					3253		4822 116 52175	100E 5% 0.5W	QP11652175
2285 2288 2289 2290	/02B/05B	4822 124 80141	10nF 10% 50V	QP12480141	3254		4822 116 52284	47K 5% 0.5W	QP11652284
		4822 124 11504	6800μF 20% 50V	QP12411504	3255		4822 116 52271	33K 5% 0.5W	QP11652271
		4822 124 11504	6800μF 20% 50V	QP12411504	3256		4822 116 52271	33K 5% 0.5W	QP11652271
					3257		4822 116 52226	560E 5% 0.5W	QP11652226
					3258		4822 116 52226	560E 5% 0.5W	QP11652226
2291 2292 2293 2294 2295		4822 124 80141	10nF 10% 50V	QP12480141	3259		4822 050 11002	1K00 1% 0.4W	QP05011002
		4822 124 80141	10nF 10% 50V	QP12480141	3260		4822 050 11002	1K00 1% 0.4W	QP05011002
		4822 124 40242	1μF 20% 63V	QP12440242	3261		4822 116 83864	10K 5% 0.5W	QP11683864
		4822 124 42392	470μF 20% 50V	QP12442392	3262		4822 116 83864	10K 5% 0.5W	QP11683864
		4822 124 41993	2200μF 20% 35V	QP12441993	3263		4822 116 52271	33K 5% 0.5W	QP11652271
2296 2297 2298 2299 ▲ 2301		4822 124 11779	S220μF 16V 20%	QP12411779	3264		4822 116 52271	33K 5% 0.5W	QP11652271
		4822 124 11779	S220μF 16V 20%	QP12411779	3265		4822 116 52303	8K2 5% 0.5W	QP11652303
		5322 124 22229	1000μF 20% 35V	QQ12422229	3266		4822 116 52303	8K2 5% 0.5W	QP11652303
		4822 124 41596	22μF 20% 50V	QP12441596	3267		4822 116 52296	6K8 5% 0.5W	QP11652296
		4822 124 40246	4.7μF 20% 63V	QP12440246	3268		4822 116 52296	6K8 5% 0.5W	QP11652296

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▲ 3269 ▲ 3270 ▲ 3271 ▲ 3272 3273		4822 052 10101	100R00 5% 0.33W	QP05210101	3334		4822 116 52245	150K 5% 0.5W	QP11652245
		4822 052 10101	100R00 5% 0.33W	QP05210101	3336		4822 116 52257	22K 5% 0.5W	QP11652257
		4822 052 10151	150R00 5% 0.33W	QP05210151	3339		4822 116 52234	100K 5% 0.5W	QP11652234
		4822 052 10151	150R00 5% 0.33W	QP05210151	3340				
		4822 116 52234	100K 5% 0.5W	QP11652234	3342		4822 116 83864	10K 5% 0.5W	QP11683864
3274 3275 3276 3277 3278		4822 116 52234	100K 5% 0.5W	QP11652234	3345		4822 116 52283	4K7 5% 0.5W	QP11652283
		4822 116 52297	68K 5% 0.5W	QP11652297	▲ 3347		4822 050 24708	4R70 1% 0.6W	QP05024708
		4822 116 52297	68K 5% 0.5W	QP11652297	3348		4822 116 83864	10K 5% 0.5W	QP11683864
		4822 116 52176	10E 5% 0.5W	QP11652176	3467		4822 116 83864	10K 5% 0.5W	QP11683864
		4822 116 52176	10E 5% 0.5W	QP11652176	3501		4822 050 11002	1K00 1% 0.4W	QP05011002
3279 3280 3281 ▲ 3282 3283		4822 116 52291	56K 5% 0.5W	QP11652291	3502		4822 050 11002	1K00 1% 0.4W	QP05011002
		4822 116 52291	56K 5% 0.5W	QP11652291	3503		4822 116 52234	100K 5% 0.5W	QP11652234
		4822 116 52296	6K8 5% 0.5W	QP11652296	3506				
		4822 053 10222	2K20 5% 1W	QP05310222	3507		4822 116 52206	120E 5% 0.5W	QP11652206
		4822 050 21009	10R00 1% 0.6W	QP05021009	3508		4822 116 52206	120E 5% 0.5W	QP11652206
3284 3285 3286 3287 3288		4822 050 21009	10R00 1% 0.6W	QP05021009	3509		4822 116 52234	100K 5% 0.5W	QP11652234
		4822 116 52285	470K 5% 0.5W	QP11652285	3510		4822 116 52234	100K 5% 0.5W	QP11652234
		4822 116 52285	470K 5% 0.5W	QP11652285	3511		4822 116 52289	5K6 5% 0.5W	QP11652289
		4822 116 83872	220R 5% 0.5W	QP11683872	3512		4822 116 52289	5K6 5% 0.5W	QP11652289
		4822 116 83872	220R 5% 0.5W	QP11683872	3513		4822 116 83872	220R 5% 0.5W	QP11683872
3289 3293 3294 3295 3296		4822 116 52235	1M 5% 0.5W	QP11652235	3514		4822 116 83872	220R 5% 0.5W	QP11683872
		4822 116 52217	270E 5% 0.5W	QP11652217	3515		4822 116 52284	47K 5% 0.5W	QP11652284
		4822 116 52217	270E 5% 0.5W	QP11652217	3516		4822 116 52284	47K 5% 0.5W	QP11652284
		4822 101 10927	TRIMMER 470R	QP10110927	▲ 3517		4822 052 10479	47R00 5% 0.33W	QP05210479
		4822 101 10927	TRIMMER 470R	QP10110927	3518		4822 052 10479	47R00 5% 0.33W	QP05210479
▲ 3297 3300 3301 3302		4822 052 10101	100R00 5% 0.33W	QP05210101	3519		4822 116 52175	100E 5% 0.5W	QP11652175
		4822 050 11002	1K00 1% 0.4W	QP05011002	3520		4822 116 52175	100E 5% 0.5W	QP11652175
		4822 050 11002	1K00 1% 0.4W	QP05011002	3542	PM57	4822 101 11477	ROTARY POTM 100K X 2 W/MOTOR	QP10111477
▲ 3303 ▲ 3304 ▲ 3305 3308 3309 3310 ▲ 3311 ▲ 3312 3313		4822 053 10331	330R00 5% 1W	QP05310331	3542	PM47	4822 101 11477	ROTARY POTM 100K X 2	QP10111477
		4822 053 10331	330R00 5% 1W	QP05310331	3551				
		4822 052 10108	1R00 5% 0.33W	QP05210108	3558		4822 116 52235	1M 5% 0.5W	QP1

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▲ 7256		4822 130 60117	2SC3419	QP13060117
7257		4822 130 10445	2SC2240	QP13010445
7258		4822 130 10445	2SC2240	QP13010445
7259		4822 130 42949	2SA970	QP13042949
7260		4822 130 42949	2SA970	QP13042949
7261		4822 130 10446	2SD2033	QP13010446
7262		4822 130 10446	2SD2033	QP13010446
7263		4822 130 10447	2SB1353	QP13010447
7264		4822 130 10447	2SB1353	QP13010447
7265		4822 130 10448	2SC3181N-R	QP13010448
7266		4822 130 10448	2SC3181N-R	QP13010448
7267		4822 130 10449	2SA1264N-R	QP13010449
7268		4822 130 10449	2SA1264N-R	QP13010449
▲ 7269	PM57	4822 130 90347	PC817	QP13090347
▲ 7270	PM57	4822 130 90347	PC817	QP13090347
7271		4822 130 10445	2SC2240	QP13010445
7272		4822 130 10445	2SC2240	QP13010445
7273		4822 130 42949	2SA970	QP13042949
▲ 7274		4822 209 83312	TA7317P	QP20983312
▲ 7275		4822 130 44197	BC558B	QP13044197
7276		4822 130 40937	BC548B	QP13040937
▲ 7277		5322 209 71759	L7815CV	QQ20971759
7278		4822 209 12715	L7915CV	QP20912715
▲ 7281		4822 130 44196	BC548C	QP13044196
▲ 7282		4822 130 44196	BC548C	QP13044196
▲ 7379		4822 209 80817	L7805CV	QP20980817
7501		4822 209 73064	NJM2068D-D	QP20973064
7551		4822 209 13648	LC78212	QP20913648
7552		4822 209 13648	LC78212	QP20913648
CONTROL BOARD				
MISCELLANEOUS				
▲ 1002	/02B/05B	4822 070 31602	FUSE T1.6A 250V IEC	QP07031602
1251	PM57	4822 276 13771	SPEAKER SYSTEM SWITCH	QP27613771
1260	PM57	4822 265 10648	HEADPHONE SOCKET	QP26510648
1260	PM47	4822 265 10653	HEADPHONE SOCKET	QP26510653
▲ 1262		4822 276 13772	POWER SWITCH	QP27613772
1400	PM57	4822 130 10165	IR RECEIVER GP1U28XP	QP13010165
1411		4822 276 13114	TACT SWITCH	QP27613114
1416		4822 277 11574	SOURCE SELECTION SWITCH	QP27711574
1417		4822 277 11574	SOURCE SELECTION SWITCH	QP27711574
1421	PM57	4822 265 10651	CINCH SOCKET - RC-5	QP26510651
1510		4822 276 13773	LOUDNESS/TONE DEFEAT SW	QP27613773
5314	PM47	4822 280 20501	RELAY 2P 24V 2A	QP28020501
5400		4822 242 72527	CERAM RESONATOR 4MHZ	QP24272527
CAPACITORS				
▲ 2309		4822 121 51387	10nF 20% 16V	QP12151387
▲ 2310		4822 121 51387	10nF 20% 16V	QP12151387
2341		4822 126 13332	10nF 20% 400V	QP12613332
2400		4822 126 13325	100nF 10% 16V	QP12613325
▲ 2401		4822 121 51387	10nF 20% 16V	QP12151387
2406		4822 124 40248	10μF 20% 63V	QP12440248
2407		4822 124 40248	10μF 20% 63V	QP12440248
2408	PM57	4822 124 22263	220μF 20% 25V	QP12422263
2409	PM57	4822 124 80141	10nF 10% 50V	QP12480141
2416	PM57	4822 124 22263	220μF 20% 25V	QP12422263
2427	PM57	4822 124 80141	10nF 10% 50V	QP12480141
▲ 2430		4822 121 51387	10nF 20% 16V	QP12151387
▲ 2435		4822 126 13325	100nF 10% 16V	QP12613325
2440	PM57	4822 126 13325	100nF 10% 16V	QP12613325

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▲ 2441		4822 121 51387	10nF 20% 16V	QP12151387
▲ 2448		4822 126 13325	100nF 10% 16V	QP12613325
2471		4822 124 40196	220μF 20% 16V	QP12440196
▲ 2472		4822 124 40196	220μF 20% 16V	QP12440196
▲ 2473		4822 124 41579	10μF 20% 50V	QP12441579
2525		4822 121 43526	47nF 5% 250V	QP12143526
2526		4822 121 43526	47nF 5% 250V	QP12143526
2527		4822 121 42469	5.6nF 5% 250V	QP12142469
2528		4822 121 42469	5.6nF 5% 250V	QP12142469
2529		4822 121 51436	820nF 10% 63V	QP12151436
2530		4822 121 51436	820nF 10% 63V	QP12151436
2531		4822 121 43396	120nF 5% 63V	QP12143396
2532		4822 121 43396	120nF 5% 63V	QP12143396
2533		4822 124 40248	10μF 20% 63V	QP12440248
2534		4822 124 40248	10μF20% 63V	QP12440248
2535		4822 121 51299	1nF 10% 50V	QP12151299
2536		4822 121 51299	1nF 10% 50V	QP12151299
2537		4822 126 13325	100nF 10% 16V	QP12613325
2538		4822 126 13325	100nF 10% 16V	QP12613325
RESISTORS				
▲ 3345		4822 053 11331	330R00 5% 2W	QP05311331
▲ 3346		4822 053 11331	330R00 5% 2W	QP05311331
3400		4822 116 52234	100K 5% 0.5W	QP11652234
3401		4822 116 83864	10K 5% 0.5W	QP11683864
3402		4822 116 83864	10K 5% 0.5W	QP11683864
3403		4822 116 52257	22K 5% 0.5W	QP11652257
3404		4822 116 52283	4K7 5% 0.5W	QP11652283
3405		4822 116 52256	2K2 5% 0.5W	QP11652256
3406		4822 116 52284	47K 5% 0.5W	QP11652284
3407		4822 116 52175	100R 5% 0.5W	QP11652175
▲ 3408	PM57	4822 052 10101	100R00 5% 0.33W	QP05210101
3411	PM57	4822 116 83864	10K 5% 0.5W	QP11683864
3412	PM57	4822 116 83864	10K 5% 0.5W	QP11683864
3413	PM57	4822 116 52257	22K 5% 0.5W	QP11652257
3414	PM57	4822 116 52284	47K 5% 0.5W	QP11652284
3415		4822 116 52257	22K 5% 0.5W	QP11652257
▲ 3416		4822 052 10101	100R00 5% 0.33W	QP05210101
3417		4822 116 52195	47R 5% 0.5W	QP11652195
3418		4822 116 52257	22K 5% 0.5W	QP11652257
3421		4822 116 52283	4K7 5% 0.5W	QP11652283
3423		4822 116 83864	10K 5% 0.5W	QP11683864
3424		4822 116 83864	10K 5% 0.5W	QP11683864
3426	PM57	4822 116 83872	220R 5% 0.5W	QP11683872
3427	PM57	4822 116 52276	3K9 5% 0.5W	QP11652276
3429		4822 116 83864	10K 5% 0.5W	QP11683864
3431		4822 116 83864	10K 5% 0.5W	QP11683864
3438		4822 116 83864	10K 5% 0.5W	QP11683864
3441		4822 116 52257	22K 5% 0.5W	QP11652257
3448		4822 116 83864	10K 5% 0.5W	QP11683864
3451		4822 050 11002	1K00 1% 0.4W	QP05011002
3452		4822 116 83864	10K 5% 0.5W	QP11683864
3453		4822 116 52222	390E 5% 0.5W	QP11652222
3454		4822 116 52222	390E 5% 0.5W	QP11652222
3455		4822 116 52257	22K 5% 0.5W	QP11652257
3456		4822 116 52257	22K 5% 0.5W	QP11652257
3458		4822 116 52257	22K 5% 0.5W	QP11652257

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POS. NO	VERS. COLOR	PART NO. (FOR EUROPE)	DESCRIPTION	PART NO. (USA/JPN)	
3461 3464 3465 ▲ 3471	PM57	4822 116 52285	470K 5% 0.5W	QP11652285	
		4822 116 83864	10K 5% 0.5W	QP11683864	
		4822 052 10101	100R00 5% 0.33W	QP05210101	
3472		4822 116 52285	470K 5% 0.5W	QP11652285	
3473		4822 116 52257	22K 5% 0.5W	QP11652257	
3474		4822 116 52285	470K 5% 0.5W	QP11652285	
3475		4822 116 52285	470K 5% 0.5W	QP11652285	
3476		4822 116 52285	470K 5% 0.5W	QP11652285	
3477 3479		PM57	4822 116 52257	22K 5% 0.5W	QP11652257
3481			4822 116 52222	390E 5% 0.5W	QP11652222
3521	4822 116 52175		100E 5% 0.5W	QP11652175	
3522	4822 116 52175		100E 5% 0.5W	QP11652175	
3523	4822 116 52231		820E 5% 0.5W	QP11652231	
3524	4822 116 52231		820E 5% 0.5W	QP11652231	
3525	4822 116 52199		68E 5% 0.5W	QP11652199	
3526	4822 116 52199		68E 5% 0.5W	QP11652199	
3527	4822 116 52231		820E 5% 0.5W	QP11652231	
3528	4822 116 52231		820E 5% 0.5W	QP11652231	
3529	4822 116 83864	10K 5% 0.5W	QP11683864		
3530	4822 116 83864	10K 5% 0.5W	QP11683864		
3531	4822 116 52289	5K6 5% 0.5W	QP11652289		
3532	4822 116 52289	5K6 5% 0.5W	QP11652289		
3533	4822 101 11478	ROTARY POTM 50K X 2	QP10111478		
3534	4822 101 11478	ROTARY POTM 50K X 2	QP10111478		
3535	4822 116 52244	15K 5% 0.5W	QP11652244		
3536	4822 116 52244	15K 5% 0.5W	QP11652244		
3537	4822 116 52284	47K 5% 0.5W	QP11652284		
3538	4822 116 52284	47K 5% 0.5W	QP11652284		
3539	4822 116 52289	5K6 5% 0.5W	QP11652289		
3540	4822 116 52289	5K6 5% 0.5W	QP11652289		
3541	4822 101 11479	ROTARY POTM 100K X 2	QP10111479		
SEMICONDUCTORS					
▲ 6268	PM47	4822 130 30621	1N4148 (COL)	QP13030621	
▲ 6400		4822 130 30621	1N4148 (COL)	QP13030621	
▲ 6401		4822 130 30621	1N4148 (COL)	QP13030621	
▲ 6402		4822 130 30621	1N4148 (COL)	QP13030621	
6403 6407		4822 130 82978	LTL-16KPE	QP13082978	
6408		4822 130 82978	LTL-16KPE	QP13082978	
6409		4822 130 82978	LTL-16KPE	QP13082978	
6410		4822 130 82978	LTL-16KPE	QP13082978	
▲ 6411		4822 130 30621	1N4148 (COL)	QP13030621	
▲ 6412		4822 130 30621	1N4148 (COL)	QP13030621	
6413 7400 7401 7403	PM57	4822 130 34174	BZX79-C4V7	QP13034174	
		4822 209 90571	TMP47C200BN-H347	QP20990571	
		4822 130 40937	BC548B	QP13040937	
▲ 7404		4822 130 44197	BC558B	QP13044197	
7405		4822 130 40937	BC548B	QP13040937	
▲ 7406 ▲ 7409		4822 130 44197	BC558B	QP13044197	
7410		4822 130 40937	BC548B	QP13040937	
▲ 7411		4822 130 44197	BC558B	QP13044197	
7412		4822 209 30193	LB1641	QP20930193	
		4822 209 30193	LB1641	QP20930193	

NOTE ON SAFETY :

Symbol ▲ Fire or electrical shock hazard. Only original parts should be used to replaced any part marked with symbol ▲. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.